



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: EA08-016

Prompted By: PE08-029

Date Opened: 08/21/2008

Date Closed: 04/20/2009

Principal Investigator: Derek Rinehardt

Subject: Front Sub-frame Corrosion

Manufacturer: Hyundai Motor Company, Hyundai Caribbean-Puerto Rico

Products: MY 1999 – 2004 Hyundai Sonata in salt belt states

Population: 165,000

Problem Description: Front sub-frame corrosion may result in collapse or separation of the right front wheel.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	194	647	793
Crashes/Fires:	0	0	0
Injury Incidents:	0	1	1
# Injuries:	0	1	1
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	2,039	2,039

*Description of Other: Warranty Claims for sub-frame replacement.

Action: This Engineering Analysis is closed. Recall 09V-124.

Engineer: Derek Rinehardt

DR

Date: 04/20/2009

Div. Chief: Jeffrey Quandt

Date: 04/20/2009

Office Dir.: Kathleen C. DeMeter

Date: 04/20/2009

Summary:

In a letter dated April 14, 2009, Hyundai-Kia America Technical Center, Inc (Hyundai) notified NHTSA that Hyundai is conducting a safety recall of model year (MY) 1999 through 2004 Hyundai Sonata vehicles manufactured prior to November 20, 2003 that are registered and operated in the following "salt belt" states and the District of Columbia: Connecticut, Delaware, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia, and Wisconsin.

Hyundai is recalling the vehicles to remedy a condition where internal corrosion of the front sub-frame may lead to separation of the lower control arm at the forward mounting point and/or separation of the axle from the transaxle. This could result in a loss of vehicle control and/or vehicle disablement. The sub-frames will be inspected in the recalled vehicles using a procedure developed by Hyundai to measure metal thickness. Parts with perforations from corrosion or with metal below the specified thickness will be replaced with redesigned sub-frames. If the minimum metal thickness is met, drainage holes and rust proofing material will be added to the existing sub-frame.

ODI's analysis of complaint data revealed that 98% of the consumer complaints were from vehicles either originally sold or operated in salt belt states. Similarly 99.7% of the warranty claims were from vehicles originally sold or operated in salt belt states.

ODI identified 105 reports of lower control arm detachment and/or axle separation from the transaxle through analysis of warranty and complaint information and consumer interviews. One hundred three (103) of the 105 incidents involved vehicles in states covered by the recall.

In addition to the subject vehicles, Hyundai also noted in the April 14, 2009 letter that MY 2001 through 2004 XG300 and XG350 were also being recalled as they were manufactured with sub-frames similar in design the subject vehicles.

Based on Hyundai's decision to conduct a safety recall this Engineering Analysis is closed.